The Source

Newsletter of the NHDES Drinking Water Source Protection Program
on the web at www.des.nh.gov/dwspp

Winter 2008

Annual Program Highlights Include New Source Water Protection Strategy

Change is afoot in the Drinking Water Source Protection Program. This past summer, we convened an advisory committee to help steer the revision of our Source Water Protection (SWP) Strategy. This Strategy involves state, federal, local, and regional agencies and other stakeholders in identifying and prioritizing issues and work tasks in order to improve the comprehensiveness, effectiveness, efficiency, and coordination of protection efforts. The last time we revised the Strategy was in 2000, when we expanded the scope of the program from groundwater protection to include surface sources. We have also experienced a number of personnel changes, which will be highlighted in subsequent issues of *The Source*.

The Core Advisory Committee (AdCom) for the SWP Strategy held two meetings this past summer. This fall and winter, three working groups – Groundwater, Surface Water, and Private Wells – will develop recommendations that will be presented to the Core AdCom, with a view to finalizing the strategy in August-November 2008. The AdCom and working groups bring a diversity of interests and expertise into the strategy revision process. We look forward to finding ways to improve source water protection at the local level and through better coordination with other programs at DES and other agencies.

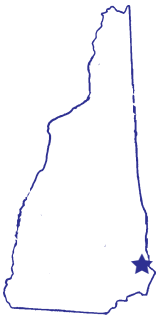
During the past year, the Drinking Water Source Protection Program:

- Trained 151 water suppliers, local officials, regional planners, and consultants at our annual workshop, which was so large this year that we went off-site to New Hampshire Technical Institute.
- Trained 23 municipal employees to conduct inspections and enforce best management practice regulations for handling and storing regulated substances.
- Trained 179 teachers in Project WET (Water Education for Teachers).
- Awarded 18 Local Source Water Protection Grants for a total of $255,662. For the next round, the maximum grant amount will be increased from $15,000 to $20,000 to improve the impact of each project.
- Awarded $1.3 million in grants to Lee, Wakefield, Walpole, Windham, Rochester and Brentwood to permanently protect 683 acres of land within their municipal source water protection areas.
- Provided individual technical assistance to the towns of Milford, Campton, Monroe, Westmoreland, Wolfeboro, Henniker and Belmont.
- Worked with the Alteration of Terrain Program to incorporate stormwater infiltration requirements into draft rules while providing for the appropriate handling of stormwater from "hotspot" sites, particularly within SWP areas.
- Closed, registered, or permitted 232 sites with groundwater discharges or floor drains.
- Released a geo-referenced database of local groundwater protection districts.
- Ensured that all new sources for community systems have wellhead protection areas and SWP programs.
- Readopted the rules for groundwater reclassification, groundwater protection best management practices, community well siting, bottled water, and groundwater discharges.
- Worked with legislative committees and commissions, particularly the SB 155 Groundwater Commission, on a variety of issues.
- Enforced water use registration and reporting requirements of RSA 488.
- Researched and worked with stakeholders to update or develop regulations affecting geo-exchange processes.
- Initiated research on groundwater/surface water interaction for bedrock wells.
- Developed new approaches for identifying water systems with source capacity deficiencies.
- With assistance from the USGS (US Geological Survey), expanded the state-wide water level monitoring network to include nine additional bedrock wells.

Highlights, *continued on page 3*

Spotlight on ... Somersworth

Lessons from a Flood: How to Plan for an Emergency



By John Jackman, Director of Somersworth Department of Public Works

Until the Floods of 2006 and 2007, the Somersworth Water Treatment Facility, built in 1892 and located on the Salmon Falls River, had never experienced flooding. We had emergency plans, but plans had never really been tested under these severe conditions. Faced with an actual emergency in 2006, we found that cell phones didn't work in the Emergency Operations Center building, we lost power, and due to the flood, even the fuel line to the back up generator was sheared. Without power, we faced the possibility that there would not only be no drinking water, there would be no water for fire protection.

What worked well in both floods was immediate cooperation between contractors, city departments, and surrounding communities. The Somersworth Fire Department stepped in and provided a truck to pump water. An interconnection was established to pump water from the City of Dover, which never hesitated to share its own limited water supply. In time for the 2007 flood, mutual aid was improved even further. Businesses had improved their own emergency preparedness, for example, stocking potable water and training emergency contacts on what to do. General Electric had improved its water supply system to immediately switch to a river supply and, while the flood was occurring, Velcro offered emergency response personnel to Somersworth.

The City of Somersworth, for its part, is improving its ability to protect pumping equipment by making buildings more water tight, including installing storm doors. The back up generator is being elevated and the fuel will be stored in an above ground tank, rather than underground. Somersworth is also improving its communication capabilities by: installing repeaters, devices designed to keep cell phones working even in buildings with thick brick walls; providing portable radios to staff; and ensuring each department's communication equipment is compatible with other departments'.

From these experiences we learned how to prevent the interruption of water for drinking and fire protection during an emergency. Preventing the loss of power and communication is essential and so is mutual aid between departments, between municipalities, and between the city and the business community. We will be well prepared for the next big flood we hope it will never happen!

Mutual Aid Helps Water Systems Cope with Emergencies

The floods in Somersworth proved that mutual aid is important and vital to emergency response. The NH Public Works Mutual Aid Program is available to municipal water and wastewater systems including Village Districts. Mutual Aid is a network of municipalities that assist one another during emergencies through partnering agreements and a protocol for requesting and receiving aid. Municipal inventories are shared with each member of the program. During emergencies, members may use the emergency pager or contact municipalities directly for help. Benefits include: 1) reducing vulnerabilities of participating communities; 2) enabling prompt and effective response; 3) providing rapid and orderly rehabilitation of infrastructure; 4) allowing exchange of supplies, equipment and personnel; and 5) under declared disasters, facilitating reimbursement from FEMA.

States all across the country are developing mutual aid programs or Water and Wastewater Agency Response Networks (WARN). You can visit the program website at www.NHWARN.org or www.t2.unh.edu/ma. David Danielson from SEA Consultants Inc. is available to meet on-site with systems to explain the program and assist with signing up. If you would like to set up a meeting with Dave, please contact him at (603) 227-2311 or David.Danielson@seacon.com.

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NEW HAMPSHIRE DEPARTMENT OF Environmental Services

29 Hazen Drive
PO Box 95
Concord, NH
03302-0095
(603) 271-3503

Commissioner	Thomas S. Burack
Asst. Commissioner	Michael J. Walls
Division Director	Harry T. Stewart
Bureau Administrator	Sarah Pillsbury
Program Manager	Paul Susca
Editors	Pierce Rigrod
	Holly Green

To subscribe contact Pierce Rigrod at (603) 271-0688 or prigrod@des.state.nh.gov
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Bottled Water and Well Siting Rules Readopted

The Drinking Water and Groundwater Bureau has been busy keeping up with the readoption of state rules, which expire every eight years. As they are adopted, all of the bureau rules are also being redesignated. DWGB rules that were titled Env-Ws will now be redesignated as either Env-Dw for drinking water or Env-Wq for water quality.

The State regulates two aspects of bottled water: the source and the handling and labeling of the product. DWGB is responsible for the permitting of the groundwater source under the statue RSA 485:1, II(g), while the Department of Health and Human Services is responsible for the regulation of the handling and labeling of the bottled water.

Recently, DWGB readopted the Groundwater Sources of Bottled Water rule, Env-Dw 303 (previously Env-Ws 389), which establish standards, criteria, and procedures for the selection of new groundwater sources of water used in the production of bottled water.

Rules for Small Production Wells for Small Community Water Systems, Env-Dw 301 (formerly Env-Ws 378) and Large Production Wells for Community Water Systems, Env-Dw 302 (formerly Env-Ws 379) were also readopted. These rules set forth procedures and standards for the development of new water supply wells to ensure that that these wells are capable of producing an adequate quantity of water and that it meets drinking water quality standards.

For questions on these rules, please contact Stephen Roy at (603) 271-3918 or Stephen.Roy@des.nh.gov. The adopted rules are now published and are available at www.des.nh.gov/rules/desadmin_list.htm, or by calling DES Public Information Center at (603) 271-2975.

If you would like to receive DWGB rulemaking notices, please contact Debra Sonderegger at Debra.Sonderegger@des.nh.gov.

Improved Fact Sheet on Bulk Water Haulers

The DWGB has recently updated the Bulk Water Hauler fact sheet. This fact sheet lists vendors that can provide an alternate water source to your system during an emergency. Please note that systems are required to notify the DWGB before any bulk water is delivered to customers. Also, hauling equipment must be dedicated to the sole task of transporting potable water and meet the requirements of He-P 2103.10 Storage and Transportation of Bulk Water for Bottling. Remember to replace the old fact sheet in your emergency plan with the updated version available on the web at www.des.nh.gov/factsheets/ws/ws-18-2.htm.

Highlights, *continued from page 1*

- Worked with communities on developing innovative wastewater and artificial recharge projects.
- Assisted communities with implementing procedures to address the management of wastewater and residuals from arsenic and radionuclide removal processes for water supply systems.

Maine Strengthens Swimming Restrictions at Sebago Lake

Maine's Legislature has strengthened a 1913 law that prohibits swimming within two miles of Portland's water supply intake on Sebago Lake. The original law established that trespassing on Portland Water District (PWD) land was illegal, prohibited "bathing," which at the time clearly included swimming, within the two-mile zone, and authorized fines of up to $20 for each offense. The law also prohibited ice fishing and boating within the closed area, which PWD enforces within 3,000 feet of the intake. The water supply is also protected by more than 2,000 acres of undeveloped land surrounding the Lower Bay, where the intake is located.

LD 1205, An Act to Amend the Laws Preventing the Pollution of Portland's Water Supply, was enacted by the legislature and signed by Maine's governor in May 2007.

This law increases fines to $500, $1000 and $2500 for first, second, and third offenses, respectively, and clarifies the "bathing" prohibition by referring to "bodily contact."

Sebago Lake, Maine's second largest lake, is the water supply source for nearly one-fifth of Maine's residents. The clear (Secchi transparency over 30 feet), deep (average 100 feet), multi-use lake is a treasured vacation destination and a renowned cold-water fishery. PWD has an extensive source water protection program that includes water quality monitoring, public outreach, careful management of the district's 1,700 acres open to public use, and working with watershed towns to inspect all development projects in the shoreland zone. During the summer, the district patrols the two-mile restricted area by boat eight hours a day, seven days a week . According to Paul Hunt, PWD's environmental manager, "PWD has learned, sometimes the hard way, that protecting a multi-use lake requires diligence. Most important is to separate as much as possible the activities from the intakes. Regulation without enforcement is no protection at all."

Sub-watershed Approach Sharpens Focus for Exeter River Restoration Efforts

By Sally Soule, DES Watershed Management Bureau, and Bob Hartzel, Geosyntec

In the fall of 2006, DES's Watershed Bureau began a comprehensive study of the Exeter River watershed. This watershed is approximately 105 square miles in southeastern New Hampshire and contributes to the Great Bay Estuary. Maintaining water quality is important, as the Exeter River serves as an important recreation and wildlife resource as well as a source of drinking water for the Town of Exeter. The first phase of this study includes a "vulnerability analysis" to serve as a basis for the design of management plans for vulnerable sub-watersheds within the greater watershed.

The objectives of the vulnerability analysis are to: (1) forecast which sub-watersheds are most vulnerable to future development; and (2) identify and rank sub-watersheds that merit prompt management planning. Geosyntec Consultants Inc. was contracted by DES to provide an initial classification of sub-watershed vulnerability, which included mapping impervious cover, e.g., roofs, parking lots and roads, within the watershed.

The estimated impervious cover in the Exeter River subwatersheds ranged from 2.4 percent to 8.0 percent, indicating sub-watersheds are currently "sensitive" to water quality impacts, based upon the Center for Watershed Protection Impervious Cover Model. (See www.cwp.org/Vulnerability_Analysis.pdf for more information) Geosyntec then assessed other watershed vulnerability factors, such as wetlands, conservation lands, buffers, water supply areas, and water quality impairments, and developed a cumulative sub-watershed vulnerability ranking. The three most vulnerable sub-watersheds were determined to be the Dudley Brook/Bloody Brook, Exeter River (Lower), and Exeter River (Middle).

DES will use information generated through the Vulnerability Analysis to develop watershed-based management plans for three vulnerable sub-watersheds. The management plans will identify structural and non-structural mechanisms for restoring and protecting water quality including land conservation, local land use policies, and best management practices. The watershed management plans will serve as valuable tools for enabling data-driven decision-making at the local level.

For more information on this project, contact Sally Soule, DES, at (603) 559-0032 or Bob Hartzel, Geosyntec, at (978) 263-9588.

Security Grants Available

The DWGB still has Water System Security Installation Grants available to community water systems to pay for labor costs to install security measures at their water systems through the Businesses United for Water Security Program. Systems can receive up to $4,500 in grant funds to pay for the *labor costs* for projects such as installing fencing around wells and pumphouses, intrusion alarms at pumphouses, gates to access roads, and backup generators or generator connection wiring. Some businesses offer discounts on products and services. Please check out the program website for more information, including grant applications and participating businesses at www.des.nh.gov/dwgb/buws. For more information, contact Johnna McKenna at (603) 271-7017 or at johnna.mckenna@des.nh.gov.

DRINKING WATER SOURCE PROTECTION PROGRAM
29 HAZEN DRIVE, CONCORD, NH 03301

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